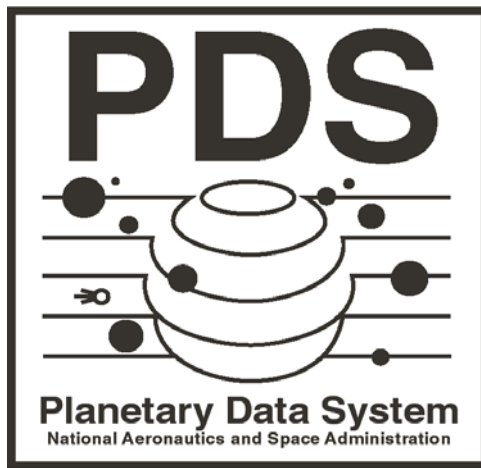


Planetary Data System

PDS-NSSDC Interface Test Report Test Phase II

December 2, 2005



Jet Propulsion Laboratory
Pasadena, California

Test Summary

This document details the test report for Phase II of the PDS-NSSDC Interface Test Plan (Version 1.1, January 3, 2006). This test was conducted between the dates of November 21, 2005 to December 2, 2005. Below is a summary for each of the steps defined in the test plan. The details of the test can be found in the Test Detail section.

Create AIP

The two AIPs corresponding to the two selected volumes were created successfully utilizing the MPGA software. Creation of the first AIP (vg_1501) took approximately 66 minutes. Creation of the second AIP (as2004_0001) took approximately 12 minutes. The first volume is approximately 383 megabytes in size while the second volume is approximately 72 megabytes in size.

Transfer AIP

The two AIPs were successfully transferred to NSSDC via FTP. Each AIP and its associated log file were placed in a tar file prior to the transfer. The first AIP (vg_1501) took approximately 15 minutes (410 Kilobytes/second) to transfer. The second AIP (as2004_0001) took approximately 3 minutes (410 Kilobytes/second) to transfer. The NSSDC staff was notified via e-mail regarding the successful transfer:

From: Sean Hardman [mailto:Sean.Hardman@jpl.nasa.gov]
Sent: Tuesday, November 22, 2005 17:01
To: mccaslin@mail630.gsfc.nasa.gov
Cc: Sean Hardman; Michael Cayan
Subject: Fwd: Created AIP packages

Pat,

The second set of AIP files are out there and ready to go. Let me know when you want to send them back or have us grab them off of your FTP server.

The first volume contains data set:
VG1-J-MAG-4-SUMM-HGCOORDS-48.0SEC-V1.0

The second volume contains the following data sets:

EAR-A-I0035-3-SDSSMOC-V1.0
EAR-A-I0034-3-WHITELEY-PHOT-V1.0
EAR-SA-COMPIL-3-SATELLITE-COLOR-V1.0
EAR-A-COMPIL-3-TNO-CEN-COLOR-V1.0
MSX-A-SPIRIT3-5-SBN0003-MIMPS-V1.0
IRAS-A-FPA-3-RDR-IMPS-V6.0
EAR-A-3-RDR-OCCULTATIONS-V2.0
EAR-A-5-DDR-DERIVED-LIGHTCURVE-V6.0
EAR-A-5-DDR-RADARSHAPE-MODELS-V2.0
EAR-A-5-DDR-RADAR-V10.0
EAR-A-5-DDR-ASTNAMES-DISCOVERY-V8.0
EAR-A-5-DDR-ASTERMAG-V8.0

As you can see from Mike message below, we wrapped each AIP and its associated log file in a tar file. I figured that it might be easier to handle the file naming issues this way. In case you are wondering, the second volume above is a conglomeration of Small Bodies data sets that were delivered as a PDS volume.

Thanks,
Sean

Retrieve and Store AIP

This step is performed by NSSDC staff at the NSSDC. The following e-mail was received from Pat McCaslin regarding the process performed at the NSSDC:

Date: Tue, 29 Nov 2005 16:30:19 -0500
From: Patrick McCaslin <mccaslin@mail630.gsfc.nasa.gov>
Subject: RE: Created AIP packages
To: 'Sean Hardman' <Sean.Hardman@jpl.nasa.gov>
X-JPL-spam-score: 0.00%
Original-recipient: rfc822;shardman@mail.jpl.nasa.gov

Sean,

The two AIPs that you sent are ready for retrieval.

I duplicated normal processing to the greatest extent possible, within the constraints posed by the duplicate AIP names and the current limitations of our AIP receiving software at the NSSDC.

I unpacked the tar files you provided and used the extractor module of MPGA to validate the AIPs. If you are curious, the extractor logfiles are still on disk:

./extractor_runs/PDS_AIP_AS2004_0001/extractor.log
./extractor_runs/PDS_AIP_VG_1501/extractor.log

The AIPs were renamed, packed into new tar files, and written to a primary DLT and a backup DLT. The AIPs were retrieved from tape and deposited into your delivery directory. The AIP filenames are:

PDS_AIP_AS2004_0001.aip
PDS_AIP_VG_1501.aip

Pat

P.S. The MPGA extractor does AIP validation and reports certain values obtained from the both the original MPGA processing log and from the attributes object in the AIP. The extractor log file format is:

Field 1: 14 Character Archive Storage ID
Field 2: MPGA extractor processing status code (0=success)
Field 3: MPGA extractor status message
Field 4: AIP filename
Field 5: NSSDC Collection ID
Field 6: NSSDC format ID
Field 7: ID of encoded format
Field 8: Ordered applied encodings
Field 9: Project ID
Field 10: Datatype
Field 11: Super entry ID (obsolete)
Field 12: Entry ID (obsolete)
Field 13: Recommended name for a single file data object (e.g. a tar file split from an AIP)
Field 14: Binary/ascii flag
Field 15: Data start time
Field 16: Data stop time

Field 17: AIP file size in bytes

Field 18: CRC32 value for the AIP file

Request and Transfer AIP

Following the notification via e-mail from the previous step, the two AIPs were successfully transferred from NSSDC via FTP. The first AIP (vg_1501) took approximately 16 minutes (390 Kilobytes/second) to transfer. The second AIP (as2004_0001) took approximately 3 minutes (410 Kilobytes/second) to transfer.

Retrieve and Verify AIP

The two AIPs were successfully extracted into their original volume structures, respectively. Checksum reports were generated against the extracted volume structures and compared against the original checksum reports. The reports were identical marking the successful completion of the test.

Test Detail

VG 1501 DATA SET TEST

Getting checksum data of original data set

```
[mdc@starburst OUTPUT]$ mkdir vg_1501
[mdc@starburst OUTPUT]$ pwd
/home/mdc/mpga_v2/bin/OUTPUT
[mdc@starburst OUTPUT]$
[mdc@starburst OUTPUT]$
[mdc@starburst OUTPUT]$
[mdc@starburst OUTPUT]$ cd /data/vg_1501/
[mdc@starburst vg_1501]$ pwd
/data/vg_1501
[mdc@starburst vg_1501]$ md5sum * >
/home/mdc/mpga_v2/bin/OUTPUT/vg_1501/checksum_level1_orig.out
md5sum: catalog: Is a directory
md5sum: data: Is a directory
md5sum: document: Is a directory
md5sum: geometry: Is a directory
md5sum: index: Is a directory
md5sum: manage: Is a directory
md5sum: software: Is a directory
[mdc@starburst vg_1501]$ md5sum */* >
/home/mdc/mpga_v2/bin/OUTPUT/vg_1501/checksum_level2_orig.out
md5sum: data/crs: Is a directory
md5sum: data/ephem: Is a directory
md5sum: data/lecp: Is a directory
md5sum: data/mag: Is a directory
md5sum: data/pls: Is a directory
md5sum: data/pra: Is a directory
md5sum: data/pws: Is a directory
md5sum: document/crs: Is a directory
md5sum: document/lecp: Is a directory
md5sum: document/mag: Is a directory
md5sum: document/mission: Is a directory
md5sum: document/pls: Is a directory
md5sum: document/pra: Is a directory
md5sum: document/pws: Is a directory
md5sum: document/softdocs: Is a directory
md5sum: document/spice: Is a directory
md5sum: document/symbols: Is a directory
md5sum: geometry/pc: Is a directory
md5sum: geometry/sun: Is a directory
md5sum: software/dos: Is a directory
md5sum: software/src: Is a directory
md5sum: software/win: Is a directory
```

```

md5sum: software/win95: Is a directory
[mdc@starburst vg_1501]$ md5sum */**/* >
/home/mdc/mpga_v2/bin/OUTPUT/vg_1501/checksum_level3_orig.out
md5sum: data/ephem/hg: Is a directory
md5sum: data/ephem/s3: Is a directory
md5sum: data/lecp/average: Is a directory
md5sum: data/lecp/sector: Is a directory
md5sum: data/mag/hg: Is a directory
md5sum: data/mag/s3: Is a directory
md5sum: data/mag/sc_field: Is a directory
md5sum: data/pls/ele_mom: Is a directory
md5sum: data/pls/ion_mom: Is a directory
md5sum: data/pls/sheath: Is a directory
md5sum: data/pls/swind: Is a directory
md5sum: data/pws/sa: Is a directory
md5sum: software/src/midas: Is a directory
md5sum: software/src/pws16pc: Is a directory
[mdc@starburst vg_1501]$ md5sum */**/**/* >
/home/mdc/mpga_v2/bin/OUTPUT/vg_1501/checksum_level4_orig.out
md5sum: data/mag/hg/1_92s: Is a directory
md5sum: data/mag/hg/48s: Is a directory
md5sum: data/mag/hg/9_6s: Is a directory
md5sum: data/mag/s3/1_92s: Is a directory
md5sum: data/mag/s3/48s: Is a directory
md5sum: data/mag/s3/9_6s: Is a directory
md5sum: data/pls/sheath/1_mode: Is a directory
md5sum: data/pls/sheath/m_mode: Is a directory
md5sum: data/pws/sa/48s: Is a directory
md5sum: data/pws/sa/4s: Is a directory
md5sum: software/src/midas/exe: Is a directory
md5sum: software/src/midas/src: Is a directory
md5sum: software/src/pws16pc/obj: Is a directory
md5sum: software/src/pws16pc/src: Is a directory
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$ md5sum */**/**/**/* >
/home/mdc/mpga_v2/bin/OUTPUT/vg_1501/checksum_level5_orig.out
[mdc@starburst vg_1501]$ md5sum */**/**/**/**/* >
/home/mdc/mpga_v2/bin/OUTPUT/vg_1501/checksum_level6_orig.out
md5sum: */**/**/**/**/*: No such file or directory
[mdc@starburst vg_1501]$

```

Create the AIP package for VG_1501 Data Set

```

[mdc@starburst data]$ cd /home/mdc/mpga_v2/bin/
[mdc@starburst bin]$ pwd
/home/mdc/mpga_v2/bin
[mdc@starburst bin]$
[mdc@starburst bin]$
[mdc@starburst bin]$

```

```
[mdc@starburst bin]$  
[mdc@starburst bin]$  
[mdc@starburst bin]$  
[mdc@starburst bin]$  
[mdc@starburst bin]$ ./COMMANDS/PDS-PACKAGE-GENERATOR.v2.interactive
```

Welcome to the simple MPGA interactive calling program.

The current Directory to Package is:

```
lrwxrwxrwx  1 mdc  users    18 Nov 21 11:03 STAGE_DIR -> /home/data/vg_1501
```

Please enter a new directory, or hit return to keep the current one:

```
/data/vg_1501
```

```
data="/data/vg_1501  
" (one-less=31) (last-char=a)
```

Going to call the program and package the directory: "/data/vg_1501"

Calling: "/bin/rm STAGE_DIR ; /bin/ln -s /data/vg_1501 STAGE_DIR"

Calling: "./COMMANDS/PDS-PACKAGE-GENERATOR.batch"

Program called in Background - Check .log, .diag, and SUCCESS or FAILURE message to screen

```
[mdc@starburst bin]$
```

PROGRAM OUTPUT

```
[mdc@starburst bin]$ SUCCESS
```

```
real  66m27.244s  
user  0m0.070s  
sys   0m0.060s
```

```
[mdc@starburst bin]$
```

3 output files created in /bin:

```
TPDS000000001_AIPfile.sfd.testfile  383800767 bytes  
out-PDS-PACKAGE-GENERATOR.log       102 bytes
```

out-PDS-PACKAGE-GENERATOR.diag 792 bytes

```
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.log
TPDS0000000001 0 AIPGEN-P_OK PASS: packaged "TPDS0000000001_AIPfile.sfd.testfile"
383800767 071381c2
[mdc@starburst bin]$
[mdc@starburst bin]$
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.diag
* DMLST NOTE: Started module "local:/MPGA-makelist"
* DMLST NOTE: Processed 1193 Files in 1 AIP(s) in 48 sec
* VERBOSE: init registry, SRVR: dbase file="/MPGA_WORKING_DIR/srv_dbaseobj_XXXXXX"
* VERBOSE: init registry, client: dbase file="/MPGA_WORKING_DIR/fsget_dbaseobj_XXXXXX"
* AIPGEN NOTE: maplist attribute "PROCESS_DESIGNATOR" link not mapped to input ISD
attributes
* AIPGEN NOTE: key link struct to input ISD externally-supplied crc attribute not found and
therefore will not be validated against the staging source files
TPDS0000000001 0 AIPGEN-P_OK PASS: packaged "TPDS0000000001_AIPfile.sfd.testfile"
383800767 071381c2
0 AIPGEN-P_TREP PASS: FINAL REPORT - PROCESSED 1 FILES FOR 3.817568e+08 TOTAL
BYTES IN 3938 SECs INTO 3.838008e+08 PACKAGE BYTES AT 96.942 KBYTES/SEC
[mdc@starburst bin]$
[mdc@starburst bin]$ cp out-PDS-PACKAGE-GENERATOR.log OUTPUT/vg_1501/
[mdc@starburst bin]$ cp out-PDS-PACKAGE-GENERATOR.diag OUTPUT/vg_1501/
[mdc@starburst bin]$ cp TPDS0000000001_AIPfile.sfd.testfile OUTPUT/vg_1501/
```

AIP EXTRACTION UTILITY TEST

```
[mdc@starburst bin]$
[mdc@starburst bin]$
[mdc@starburst bin]$ ./COMMANDS/PDS-PACKAGE-GENERATOR.v2.splitter.cmd
[mdc@starburst bin]$ tail -f out-PDS-PACKAGE-GENERATOR.splitter.diag
* VERBOSE: init registry, SRVR: dbase file="/MPGA_WORKING_DIR/srv_dbaseobj_XXXXXX"
* Splitter Started and Initialized:
```

Accessing AIPs...

....

```
TPDS0000000001 0 SPL PASS: "/TPDS0000000001_AIPfile.sfd.testfile" into
"/OUTPUT/TPDS0000000001.dat.tar" and "/OUTPUT/TPDS0000000001.att"
* SPL NOTE: module "local:/MPGA-splitter" completely processed 1 out of 1 AIPs in 198 (secs)
```

PROGRAM OUTPUT

SUCCESS


```
real 3m18.116s
user 0m0.010s
sys 0m0.120s
```

4 Output files created:

```
/bin/out-PDS-PACKAGE-GENERATOR.splitter.log 141 bytes  
/bin/out-PDS-PACKAGE-GENERATOR.splitter.diag 62654 bytes
```

```
/bin/OUTPUT/TPDS0000000001.att 1949630 bytes  
/bin/OUTPUT/TPDS0000000001.dat.tar 382720000 bytes
```

```
[mdc@starburst bin]$ cd OUTPUT/  
[mdc@starburst OUTPUT]$ pwd  
/home/mdc/mpga_v2/bin/OUTPUT  
[mdc@starburst OUTPUT]$ time tar -xvf TPDS0000000001.dat.tar
```

....

```
real 0m4.910s  
user 0m0.050s  
sys 0m2.730s
```

Files inside AIP package are inside /bin/OUTPUT/TPDS0000000001.dat.dir

Gather checksum values for every file inside this directory

```
[mdc@starburst OUTPUT]$ cd TPDS0000000001.dat.dir/  
[mdc@starburst TPDS0000000001.dat.dir]$  
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum * > ../vg_1501/checksum_level1_mpga.out  
md5sum: catalog: Is a directory  
md5sum: data: Is a directory  
md5sum: document: Is a directory  
md5sum: geometry: Is a directory  
md5sum: index: Is a directory  
md5sum: manage: Is a directory  
md5sum: software: Is a directory  
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */* > ../vg_1501/checksum_level2_mpga.out  
md5sum: data/crs: Is a directory  
md5sum: data/ephem: Is a directory  
md5sum: data/lecp: Is a directory  
md5sum: data/mag: Is a directory  
md5sum: data/pls: Is a directory  
md5sum: data/pra: Is a directory  
md5sum: data/pws: Is a directory  
md5sum: document/crs: Is a directory  
md5sum: document/lecp: Is a directory  
md5sum: document/mag: Is a directory
```

```
md5sum: document/mission: Is a directory
md5sum: document/pls: Is a directory
md5sum: document/pra: Is a directory
md5sum: document/pws: Is a directory
md5sum: document/softdocs: Is a directory
md5sum: document/spice: Is a directory
md5sum: document/symbols: Is a directory
md5sum: geometry/pc: Is a directory
md5sum: geometry/sun: Is a directory
md5sum: software/dos: Is a directory
md5sum: software/src: Is a directory
md5sum: software/win: Is a directory
md5sum: software/win95: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */** > ../vg_1501/checksum_level3_mpga.out
md5sum: data/ephem/hg: Is a directory
md5sum: data/ephem/s3: Is a directory
md5sum: data/lecp/average: Is a directory
md5sum: data/lecp/sector: Is a directory
md5sum: data/mag/hg: Is a directory
md5sum: data/mag/s3: Is a directory
md5sum: data/mag/sc_field: Is a directory
md5sum: data/pls/ele_mom: Is a directory
md5sum: data/pls/ion_mom: Is a directory
md5sum: data/pls/sheath: Is a directory
md5sum: data/pls/swind: Is a directory
md5sum: data/pws/sa: Is a directory
md5sum: software/src/midas: Is a directory
md5sum: software/src/pws16pc: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/* > ../vg_1501/checksum_level4_mpga.out
md5sum: data/mag/hg/1_92s: Is a directory
md5sum: data/mag/hg/48s: Is a directory
md5sum: data/mag/hg/9_6s: Is a directory
md5sum: data/mag/s3/1_92s: Is a directory
md5sum: data/mag/s3/48s: Is a directory
md5sum: data/mag/s3/9_6s: Is a directory
md5sum: data/pls/sheath/1_mode: Is a directory
md5sum: data/pls/sheath/m_mode: Is a directory
md5sum: data/pws/sa/48s: Is a directory
md5sum: data/pws/sa/4s: Is a directory
md5sum: software/src/midas/exe: Is a directory
md5sum: software/src/midas/src: Is a directory
md5sum: software/src/pws16pc/obj: Is a directory
md5sum: software/src/pws16pc/src: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/*/* > ../vg_1501/checksum_level5_mpga.out
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/*/*/* >
../vg_1501/checksum_level6_mpga.out
md5sum: */**/*/*/*: No such file or directory
[mdc@starburst TPDS0000000001.dat.dir]$
```

Compare checksum values between the original values and the values gathered from the contents within the AIP package

```
[mdc@starburst TPDS0000000001.dat.dir]$ pwd
/home/mdc/mpga_v2/bin/OUTPUT/TPDS0000000001.dat.dir
[mdc@starburst TPDS0000000001.dat.dir]$ cd ..
[mdc@starburst OUTPUT]$ cd vg_1501/
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$ diff checksum_level1_orig.out checksum_level1_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level2_orig.out checksum_level2_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level3_orig.out checksum_level3_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level4_orig.out checksum_level4_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level5_orig.out checksum_level5_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level6_orig.out checksum_level6_mpga.out
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$
```

END OF VG_1501 DATA SET TEST

All output files generated are located in /home/mdc/mpga_v2/bin/OUTPUT/vg_1501

AS2004_0001 DATA SET TEST

Gather checksum values for every file in the original data set

```
[mdc@starburst bin]$ cd OUTPUT
[mdc@starburst OUTPUT]$ mkdir as2004_0001
[mdc@starburst OUTPUT]$ cd as2004_0001/
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$ cd /data/as2004_0001/
[mdc@starburst as2004_0001]$ md5sum * >
/home/mdc/mpga_v2/bin/OUTPUT/as2004_0001/checksum_level1_orig.out
md5sum: catalog: Is a directory
md5sum: data: Is a directory
md5sum: document: Is a directory
md5sum: index: Is a directory
[mdc@starburst as2004_0001]$ md5sum */* >
/home/mdc/mpga_v2/bin/OUTPUT/as2004_0001/checksum_level2_orig.out
md5sum: data/astermag: Is a directory
md5sum: data/discover: Is a directory
```

```
md5sum: data/lc: Is a directory
md5sum: data/mimps04: Is a directory
md5sum: data/occ04: Is a directory
md5sum: data/radar: Is a directory
md5sum: data/rshape04: Is a directory
md5sum: data/satcol: Is a directory
md5sum: data/sdss04: Is a directory
md5sum: data/simps04: Is a directory
md5sum: data/tnocencol: Is a directory
md5sum: data/whiteley: Is a directory
[mdc@starburst as2004_0001]$ md5sum */**/* >
/home/mdc/mpga_v2/bin/OUTPUT/as2004_0001/checksum_level3_orig.out
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$ md5sum */**/**/* >
/home/mdc/mpga_v2/bin/OUTPUT/as2004_0001/checksum_level4_orig.out
md5sum: */**/**/*: No such file or directory
```

Create the AIP package

```
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$ cd /home/mdc/mpga_v2/bin
[mdc@starburst bin]$ ./COMMANDS/PDS-PACKAGE-GENERATOR.v2.interactive
```

Welcome to the simple MPGGA interactive calling program.

The current Directory to Package is:

```
lrwxrwxrwx 1 mdc users 13 Nov 21 11:07 STAGE_DIR -> /data/vg_1501
```

Please enter a new directory, or hit return to keep the current one:

```
/data/as2004_0001
```

```
data="/data/as2004_0001
" (one-less=31) (last-char=a)
```

Going to call the program and package the directory: "/data/as2004_0001"

Calling: "/bin/rm STAGE_DIR ; /bin/ln -s /data/as2004_0001 STAGE_DIR"

Calling: "./COMMANDS/PDS-PACKAGE-GENERATOR.batch"

Program called in Background - Check .log, .diag, and SUCCESS or FAILURE message to screen

```
[mdc@starburst bin]$
```

PROGRAM OUTPUT

[mdc@starburst bin]\$ SUCCESS

real 12m29.776s
user 0m0.000s
sys 0m0.000s

3 output files created in /bin directory:

TPDS0000000001_AIPfile.sfd.testfile 72731578 bytes
out-PDS-PACKAGE-GENERATOR.diag 788 bytes
out-PDS-PACKAGE-GENERATOR.log 101 bytes

```
[mdc@starburst bin]$  
[mdc@starburst bin]$  
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.log  
TPDS0000000001 0 AIPGEN-P_OK PASS: packaged "TPDS0000000001_AIPfile.sfd.testfile"  
72731578 06ef138a  
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.diag  
* DMLST NOTE: Started module "local:/MPGA-makelist"  
* DMLST NOTE: Processed 175 Files in 1 AIP(s) in 7 sec  
* VERBOSE: init registry, SRVR: dbase file="/MPGA_WORKING_DIR/srv_dbaseobj_XXXXXX"  
* VERBOSE: init registry, client: dbase file="/MPGA_WORKING_DIR/fsget_dbaseobj_XXXXXX"  
* AIPGEN NOTE: maplist attribute "PROCESS_DESIGNATOR" link not mapped to input ISD  
attributes  
* AIPGEN NOTE: key link struct to input ISD externally-supplied crc attribute not found and  
therefore will not be validated against the staging source files  
TPDS0000000001 0 AIPGEN-P_OK PASS: packaged "TPDS0000000001_AIPfile.sfd.testfile"  
72731578 06ef138a  
0 AIPGEN-P_TREP PASS: FINAL REPORT - PROCESSED 1 FILES FOR 7.242756e+07 TOTAL  
BYTES IN 741 SECs INTO 7.273158e+07 PACKAGE BYTES AT 97.743 KBYTES/SEC  
[mdc@starburst bin]$
```

AS2004_2001 DATA RETRIEVAL TEST

```
[mdc@starburst bin]$  
[mdc@starburst bin]$  
[mdc@starburst bin]$ ./COMMANDS/PDS-PACKAGE-GENERATOR.v2.splitter.cmd  
[mdc@starburst bin]$  
[mdc@starburst bin]$ tail -f out-PDS-PACKAGE-GENERATOR.splitter.diag  
TPDS0000000001.dat.dir/catalog/j22_harpalyke.cat  
TPDS0000000001.dat.dir/catalog/j23_kalyke.cat  
TPDS0000000001.dat.dir/catalog/j24_iocaste.cat  
TPDS0000000001.dat.dir/catalog/j27_praxidyke.cat  
TPDS0000000001.dat.dir/catalog/j6_himalia.cat
```

TPDS0000000001.dat.dir/catalog/j7_elara.cat
TPDS0000000001.dat.dir/catalog/j8_pasiphae.cat
TPDS0000000001.dat.dir/catalog/j9_sinope.cat
TPDS0000000001.dat.dir/catalog/lc.cat
TPDS0000000001.dat.dir/catalog/lcrefs.cat
TPDS0000000001.dat.dir/catalog/mimps.cat
TPDS0000000001.dat.dir/catalog/mimpsrefs.cat
TPDS0000000001.dat.dir/catalog/misssupparch.cat
TPDS0000000001.dat.dir/catalog/msxhost.cat
TPDS0000000001.dat.dir/catalog/msxmission.cat
TPDS0000000001.dat.dir/catalog/obs325t1host.cat
TPDS0000000001.dat.dir/catalog/obs325t2host.cat
TPDS0000000001.dat.dir/catalog/obs376t1host.cat
TPDS0000000001.dat.dir/catalog/obs413t2host.cat
TPDS0000000001.dat.dir/catalog/occ.cat
TPDS0000000001.dat.dir/catalog/occrefs.cat
TPDS0000000001.dat.dir/catalog/radar.cat
TPDS0000000001.dat.dir/catalog/radarrefs.cat
TPDS0000000001.dat.dir/catalog/references_list.cat
TPDS0000000001.dat.dir/catalog/rshape.cat
TPDS0000000001.dat.dir/catalog/rshaperefs.cat
TPDS0000000001.dat.dir/catalog/s19_ymir.cat
TPDS0000000001.dat.dir/catalog/s20_paaliaq.cat
TPDS0000000001.dat.dir/catalog/s21_tarvos.cat
TPDS0000000001.dat.dir/catalog/s24_kiviuq.cat
TPDS0000000001.dat.dir/catalog/s26_albiorix.cat
TPDS0000000001.dat.dir/catalog/s28_erriapo.cat
TPDS0000000001.dat.dir/catalog/s29_siarnaq.cat
TPDS0000000001.dat.dir/catalog/satcol.cat
TPDS0000000001.dat.dir/catalog/sdssmoc.cat
TPDS0000000001.dat.dir/catalog/sdssrefs.cat
TPDS0000000001.dat.dir/catalog/simps.cat
TPDS0000000001.dat.dir/catalog/simpsrefs.cat
TPDS0000000001.dat.dir/catalog/spirit3inst.cat
TPDS0000000001.dat.dir/catalog/tnocencol.cat
TPDS0000000001.dat.dir/catalog/u12_portia.cat
TPDS0000000001.dat.dir/catalog/u13_rosalind.cat
TPDS0000000001.dat.dir/catalog/u16_caliban.cat
TPDS0000000001.dat.dir/catalog/u17_sycorax.cat
TPDS0000000001.dat.dir/catalog/vgbhost.cat
TPDS0000000001.dat.dir/catalog/vgbinst.cat
TPDS0000000001.dat.dir/catalog/voldesc.cat
TPDS0000000001.dat.dir/catalog/whiteley.cat
TPDS0000000001.dat.dir/catalog/whiteleyrefs.cat
TPDS0000000001.dat.dir/data/
TPDS0000000001.dat.dir/data/astermag/
TPDS0000000001.dat.dir/data/astermag/astermag.lbl
TPDS0000000001.dat.dir/data/astermag/astermag.tab
TPDS0000000001.dat.dir/data/discover/
TPDS0000000001.dat.dir/data/discover/discnote.lbl

TPDS0000000001.dat.dir/data/discover/discnote.tab
TPDS0000000001.dat.dir/data/discover/discover.lbl
TPDS0000000001.dat.dir/data/discover/discover.tab
TPDS0000000001.dat.dir/data/lc/
TPDS0000000001.dat.dir/data/lc/lccross.lbl
TPDS0000000001.dat.dir/data/lc/lccross.tab
TPDS0000000001.dat.dir/data/lc/lc.lbl
TPDS0000000001.dat.dir/data/lc/lceref.lbl
TPDS0000000001.dat.dir/data/lc/lceref.tab
TPDS0000000001.dat.dir/data/lc/lc.tab
TPDS0000000001.dat.dir/data/mimps04/
TPDS0000000001.dat.dir/data/mimps04/mimpsalb.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpsalb.tab
TPDS0000000001.dat.dir/data/mimps04/mimpsfilt.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpsfilt.tab
TPDS0000000001.dat.dir/data/mimps04/mimpssight.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpssight.tab
TPDS0000000001.dat.dir/data/occ04/
TPDS0000000001.dat.dir/data/occ04/occdiam.lbl
TPDS0000000001.dat.dir/data/occ04/occdiam.tab
TPDS0000000001.dat.dir/data/occ04/occlist.lbl
TPDS0000000001.dat.dir/data/occ04/occlist.tab
TPDS0000000001.dat.dir/data/occ04/occsatlist.lbl
TPDS0000000001.dat.dir/data/occ04/occsatlist.tab
TPDS0000000001.dat.dir/data/occ04/occsattime.lbl
TPDS0000000001.dat.dir/data/occ04/occsattime.tab
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TPDS0000000001.dat.dir/data/occ04/occtimings.tab
TPDS0000000001.dat.dir/data/occ04/odiamrefs.lbl
TPDS0000000001.dat.dir/data/occ04/odiamrefs.tab
TPDS0000000001.dat.dir/data/radar/
TPDS0000000001.dat.dir/data/radar/radar.lbl
TPDS0000000001.dat.dir/data/radar/radarref.lbl
TPDS0000000001.dat.dir/data/radar/radarref.tab
TPDS0000000001.dat.dir/data/radar/radar.tab
TPDS0000000001.dat.dir/data/rshape04/
TPDS0000000001.dat.dir/data/rshape04/1620geographos.lbl
TPDS0000000001.dat.dir/data/rshape04/1620geographos.tab
TPDS0000000001.dat.dir/data/rshape04/1998ky26.lbl
TPDS0000000001.dat.dir/data/rshape04/1998ky26.tab
TPDS0000000001.dat.dir/data/rshape04/2063bacchus.lbl
TPDS0000000001.dat.dir/data/rshape04/2063bacchus.tab
TPDS0000000001.dat.dir/data/rshape04/216kleopatra.lbl
TPDS0000000001.dat.dir/data/rshape04/216kleopatra.tab
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TPDS0000000001.dat.dir/data/rshape04/25143itokawa.tab
TPDS0000000001.dat.dir/data/rshape04/4179toutatis2.lbl
TPDS0000000001.dat.dir/data/rshape04/4179toutatis2.tab
TPDS0000000001.dat.dir/data/rshape04/4179toutatis.lbl
TPDS0000000001.dat.dir/data/rshape04/4179toutatis.tab

TPDS0000000001.dat.dir/data/rshape04/4769castalia.lbl
TPDS0000000001.dat.dir/data/rshape04/4769castalia.tab
TPDS0000000001.dat.dir/data/rshape04/52760.lbl
TPDS0000000001.dat.dir/data/rshape04/52760.tab
TPDS0000000001.dat.dir/data/rshape04/6489golevka.lbl
TPDS0000000001.dat.dir/data/rshape04/6489golevka.tab
TPDS0000000001.dat.dir/data/satcol/
TPDS0000000001.dat.dir/data/satcol/satcol.lbl
TPDS0000000001.dat.dir/data/satcol/satcol.tab
TPDS0000000001.dat.dir/data/satcol/satrefs.lbl
TPDS0000000001.dat.dir/data/satcol/satrefs.tab
TPDS0000000001.dat.dir/data/sdss04/
TPDS0000000001.dat.dir/data/sdss04/g.lbl
TPDS0000000001.dat.dir/data/sdss04/g.tab
TPDS0000000001.dat.dir/data/sdss04/i.lbl
TPDS0000000001.dat.dir/data/sdss04/i.tab
TPDS0000000001.dat.dir/data/sdss04/r.lbl
TPDS0000000001.dat.dir/data/sdss04/r.tab
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1.lbl
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1run.lbl
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1run.tab
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1.tab
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TPDS0000000001.dat.dir/data/sdss04/z.lbl
TPDS0000000001.dat.dir/data/sdss04/z.tab
TPDS0000000001.dat.dir/data/simps04/
TPDS0000000001.dat.dir/data/simps04/addl.lbl
TPDS0000000001.dat.dir/data/simps04/addl.tab
TPDS0000000001.dat.dir/data/simps04/diamalb.lbl
TPDS0000000001.dat.dir/data/simps04/diamalb.tab
TPDS0000000001.dat.dir/data/simps04/elem1.lbl
TPDS0000000001.dat.dir/data/simps04/elem1.tab
TPDS0000000001.dat.dir/data/simps04/elem2.lbl
TPDS0000000001.dat.dir/data/simps04/elem2.tab
TPDS0000000001.dat.dir/data/simps04/elem3.lbl
TPDS0000000001.dat.dir/data/simps04/elem3.tab
TPDS0000000001.dat.dir/data/simps04/misled.lbl
TPDS0000000001.dat.dir/data/simps04/misled.tab
TPDS0000000001.dat.dir/data/simps04/reject.lbl
TPDS0000000001.dat.dir/data/simps04/reject.tab
TPDS0000000001.dat.dir/data/simps04/sightings.lbl
TPDS0000000001.dat.dir/data/simps04/sightings.tab
TPDS0000000001.dat.dir/data/simps04/single.lbl
TPDS0000000001.dat.dir/data/simps04/single.tab
TPDS0000000001.dat.dir/data/simps04/stmodel.lbl
TPDS0000000001.dat.dir/data/simps04/stmodel.tab
TPDS0000000001.dat.dir/data/tnocencol/
TPDS0000000001.dat.dir/data/tnocencol/tnocencol.lbl
TPDS0000000001.dat.dir/data/tnocencol/tnocencol.tab

TPDS0000000001.dat.dir/data/tnocencol/tnocenrefs.lbl
TPDS0000000001.dat.dir/data/tnocencol/tnocenrefs.tab
TPDS0000000001.dat.dir/data/whiteley/
TPDS0000000001.dat.dir/data/whiteley/ecasband.lbl
TPDS0000000001.dat.dir/data/whiteley/ecasband.tab
TPDS0000000001.dat.dir/data/whiteley/ecasfltr.lbl
TPDS0000000001.dat.dir/data/whiteley/ecasfltr.tab
TPDS0000000001.dat.dir/data/whiteley/whiteley.lbl
TPDS0000000001.dat.dir/data/whiteley/whiteley.tab
TPDS0000000001.dat.dir/document/
TPDS0000000001.dat.dir/document/docinfo.txt
TPDS0000000001.dat.dir/index/
TPDS0000000001.dat.dir/index/index.lbl
TPDS0000000001.dat.dir/index/index.tab
TPDS0000000001.dat.dir/index/indxinfo.txt
TPDS0000000001 0 SPL PASS: "./TPDS0000000001_AIPfile.sfd.testfile" into
"./OUTPUT/TPDS0000000001.dat.tar" and "./OUTPUT/TPDS0000000001.att"
* SPL NOTE: module "local:./MPGA-splitter" completely processed 1 out of 1 AIPs in 37 (secs)

PROGRAM OUTPUT

SUCCESS

real 0m37.724s
user 0m0.000s
sys 0m0.090s

4 output files created:

/bin/out-PDS-PACKAGE-GENERATOR.splitter.diag 9353 bytes
/bin/out-PDS-PACKAGE-GENERATOR.splitter.log 141 bytes

/bin/OUTPUT/TPDS0000000001.dat.tar 72570880 bytes
/bin/OUTPUT/TPDS0000000001.att 290260 bytes

```
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.splitter.log
TPDS0000000001 0 SPL PASS: "./TPDS0000000001_AIPfile.sfd.testfile" into
"./OUTPUT/TPDS0000000001.dat.tar" and "./OUTPUT/TPDS0000000001.att"
[mdc@starburst bin]$
[mdc@starburst bin]$ cd OUTPUT/
[mdc@starburst OUTPUT]$ time tar -xvf TPDS0000000001.dat.tar
TPDS0000000001.dat.dir/
TPDS0000000001.dat.dir/aareadme.txt
TPDS0000000001.dat.dir/voldesc.cat
TPDS0000000001.dat.dir/catalog/
TPDS0000000001.dat.dir/catalog/astermag.cat
```

TPDS0000000001.dat.dir/catalog/astermagrefs.cat
TPDS0000000001.dat.dir/catalog/discover.cat
TPDS0000000001.dat.dir/catalog/discoverrefs.cat
TPDS0000000001.dat.dir/catalog/fpainst.cat
TPDS0000000001.dat.dir/catalog/i0028inst_2.cat
TPDS0000000001.dat.dir/catalog/i0028inst.cat
TPDS0000000001.dat.dir/catalog/i0034inst.cat
TPDS0000000001.dat.dir/catalog/i0035inst.cat
TPDS0000000001.dat.dir/catalog/irashost.cat
TPDS0000000001.dat.dir/catalog/j10_lysithea.cat
TPDS0000000001.dat.dir/catalog/j11_carme.cat
TPDS0000000001.dat.dir/catalog/j12_ananke.cat
TPDS0000000001.dat.dir/catalog/j13_leda.cat
TPDS0000000001.dat.dir/catalog/j17_callirrhoe.cat
TPDS0000000001.dat.dir/catalog/j18_themisto.cat
TPDS0000000001.dat.dir/catalog/j19_megaclite.cat
TPDS0000000001.dat.dir/catalog/j20_taygete.cat
TPDS0000000001.dat.dir/catalog/j22_harpalyke.cat
TPDS0000000001.dat.dir/catalog/j23_kalyke.cat
TPDS0000000001.dat.dir/catalog/j24_iocaste.cat
TPDS0000000001.dat.dir/catalog/j27_praxidyke.cat
TPDS0000000001.dat.dir/catalog/j6_himalia.cat
TPDS0000000001.dat.dir/catalog/j7_elara.cat
TPDS0000000001.dat.dir/catalog/j8_pasiphae.cat
TPDS0000000001.dat.dir/catalog/j9_sinope.cat
TPDS0000000001.dat.dir/catalog/lc.cat
TPDS0000000001.dat.dir/catalog/lcrefs.cat
TPDS0000000001.dat.dir/catalog/mimps.cat
TPDS0000000001.dat.dir/catalog/mimpsrefs.cat
TPDS0000000001.dat.dir/catalog/misssupparch.cat
TPDS0000000001.dat.dir/catalog/msxhost.cat
TPDS0000000001.dat.dir/catalog/msxmission.cat
TPDS0000000001.dat.dir/catalog/obs325t1host.cat
TPDS0000000001.dat.dir/catalog/obs325t2host.cat
TPDS0000000001.dat.dir/catalog/obs376t1host.cat
TPDS0000000001.dat.dir/catalog/obs413t2host.cat
TPDS0000000001.dat.dir/catalog/occ.cat
TPDS0000000001.dat.dir/catalog/occrefs.cat
TPDS0000000001.dat.dir/catalog/radar.cat
TPDS0000000001.dat.dir/catalog/radarrefs.cat
TPDS0000000001.dat.dir/catalog/references_list.cat
TPDS0000000001.dat.dir/catalog/rshape.cat
TPDS0000000001.dat.dir/catalog/rshaperefs.cat
TPDS0000000001.dat.dir/catalog/s19_ymir.cat
TPDS0000000001.dat.dir/catalog/s20_paaliaq.cat
TPDS0000000001.dat.dir/catalog/s21_tarvos.cat
TPDS0000000001.dat.dir/catalog/s24_kiviuq.cat
TPDS0000000001.dat.dir/catalog/s26_albiorix.cat
TPDS0000000001.dat.dir/catalog/s28_erriapo.cat
TPDS0000000001.dat.dir/catalog/s29_siarnaq.cat

TPDS0000000001.dat.dir/catalog/satcol.cat
TPDS0000000001.dat.dir/catalog/sdssmoc.cat
TPDS0000000001.dat.dir/catalog/sdssrefs.cat
TPDS0000000001.dat.dir/catalog/simps.cat
TPDS0000000001.dat.dir/catalog/simpsrefs.cat
TPDS0000000001.dat.dir/catalog/spirit3inst.cat
TPDS0000000001.dat.dir/catalog/tnocencol.cat
TPDS0000000001.dat.dir/catalog/u12_portia.cat
TPDS0000000001.dat.dir/catalog/u13_rosalind.cat
TPDS0000000001.dat.dir/catalog/u16_caliban.cat
TPDS0000000001.dat.dir/catalog/u17_sycorax.cat
TPDS0000000001.dat.dir/catalog/vgbhost.cat
TPDS0000000001.dat.dir/catalog/vgbinst.cat
TPDS0000000001.dat.dir/catalog/voldesc.cat
TPDS0000000001.dat.dir/catalog/whiteley.cat
TPDS0000000001.dat.dir/catalog/whiteleyrefs.cat
TPDS0000000001.dat.dir/data/
TPDS0000000001.dat.dir/data/astermag/
TPDS0000000001.dat.dir/data/astermag/astermag.lbl
TPDS0000000001.dat.dir/data/astermag/astermag.tab
TPDS0000000001.dat.dir/data/discover/
TPDS0000000001.dat.dir/data/discover/discnote.lbl
TPDS0000000001.dat.dir/data/discover/discnote.tab
TPDS0000000001.dat.dir/data/discover/discover.lbl
TPDS0000000001.dat.dir/data/discover/discover.tab
TPDS0000000001.dat.dir/data/lc/
TPDS0000000001.dat.dir/data/lc/lccross.lbl
TPDS0000000001.dat.dir/data/lc/lccross.tab
TPDS0000000001.dat.dir/data/lc/lc.lbl
TPDS0000000001.dat.dir/data/lc/lceref.lbl
TPDS0000000001.dat.dir/data/lc/lceref.tab
TPDS0000000001.dat.dir/data/lc/lc.tab
TPDS0000000001.dat.dir/data/mimps04/
TPDS0000000001.dat.dir/data/mimps04/mimpsalb.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpsalb.tab
TPDS0000000001.dat.dir/data/mimps04/mimpsfilt.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpsfilt.tab
TPDS0000000001.dat.dir/data/mimps04/mimpssight.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpssight.tab
TPDS0000000001.dat.dir/data/occ04/
TPDS0000000001.dat.dir/data/occ04/occdiam.lbl
TPDS0000000001.dat.dir/data/occ04/occdiam.tab
TPDS0000000001.dat.dir/data/occ04/occlist.lbl
TPDS0000000001.dat.dir/data/occ04/occlist.tab
TPDS0000000001.dat.dir/data/occ04/occsatlist.lbl
TPDS0000000001.dat.dir/data/occ04/occsatlist.tab
TPDS0000000001.dat.dir/data/occ04/occsattime.lbl
TPDS0000000001.dat.dir/data/occ04/occsattime.tab
TPDS0000000001.dat.dir/data/occ04/occtimings.lbl
TPDS0000000001.dat.dir/data/occ04/occtimings.tab

TPDS0000000001.dat.dir/data/occ04/odiamrefs.lbl
TPDS0000000001.dat.dir/data/occ04/odiamrefs.tab
TPDS0000000001.dat.dir/data/radar/
TPDS0000000001.dat.dir/data/radar/radar.lbl
TPDS0000000001.dat.dir/data/radar/radarref.lbl
TPDS0000000001.dat.dir/data/radar/radarref.tab
TPDS0000000001.dat.dir/data/radar/radar.tab
TPDS0000000001.dat.dir/data/rshape04/
TPDS0000000001.dat.dir/data/rshape04/1620geographos.lbl
TPDS0000000001.dat.dir/data/rshape04/1620geographos.tab
TPDS0000000001.dat.dir/data/rshape04/1998ky26.lbl
TPDS0000000001.dat.dir/data/rshape04/1998ky26.tab
TPDS0000000001.dat.dir/data/rshape04/2063bacchus.lbl
TPDS0000000001.dat.dir/data/rshape04/2063bacchus.tab
TPDS0000000001.dat.dir/data/rshape04/216kleopatra.lbl
TPDS0000000001.dat.dir/data/rshape04/216kleopatra.tab
TPDS0000000001.dat.dir/data/rshape04/25143itokawa.lbl
TPDS0000000001.dat.dir/data/rshape04/25143itokawa.tab
TPDS0000000001.dat.dir/data/rshape04/4179toutatis2.lbl
TPDS0000000001.dat.dir/data/rshape04/4179toutatis2.tab
TPDS0000000001.dat.dir/data/rshape04/4179toutatis.lbl
TPDS0000000001.dat.dir/data/rshape04/4179toutatis.tab
TPDS0000000001.dat.dir/data/rshape04/4769castalia.lbl
TPDS0000000001.dat.dir/data/rshape04/4769castalia.tab
TPDS0000000001.dat.dir/data/rshape04/52760.lbl
TPDS0000000001.dat.dir/data/rshape04/52760.tab
TPDS0000000001.dat.dir/data/rshape04/6489golevka.lbl
TPDS0000000001.dat.dir/data/rshape04/6489golevka.tab
TPDS0000000001.dat.dir/data/satcol/
TPDS0000000001.dat.dir/data/satcol/satcol.lbl
TPDS0000000001.dat.dir/data/satcol/satcol.tab
TPDS0000000001.dat.dir/data/satcol/satrefs.lbl
TPDS0000000001.dat.dir/data/satcol/satrefs.tab
TPDS0000000001.dat.dir/data/sdss04/
TPDS0000000001.dat.dir/data/sdss04/g.lbl
TPDS0000000001.dat.dir/data/sdss04/g.tab
TPDS0000000001.dat.dir/data/sdss04/i.lbl
TPDS0000000001.dat.dir/data/sdss04/i.tab
TPDS0000000001.dat.dir/data/sdss04/r.lbl
TPDS0000000001.dat.dir/data/sdss04/r.tab
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1.lbl
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1run.lbl
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1run.tab
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TPDS0000000001.dat.dir/data/sdss04/u.lbl
TPDS0000000001.dat.dir/data/sdss04/u.tab
TPDS0000000001.dat.dir/data/sdss04/z.lbl
TPDS0000000001.dat.dir/data/sdss04/z.tab
TPDS0000000001.dat.dir/data/simps04/
TPDS0000000001.dat.dir/data/simps04/addl.lbl

TPDS0000000001.dat.dir/data/simps04/addl.tab
TPDS0000000001.dat.dir/data/simps04/diamalb.lbl
TPDS0000000001.dat.dir/data/simps04/diamalb.tab
TPDS0000000001.dat.dir/data/simps04/elem1.lbl
TPDS0000000001.dat.dir/data/simps04/elem1.tab
TPDS0000000001.dat.dir/data/simps04/elem2.lbl
TPDS0000000001.dat.dir/data/simps04/elem2.tab
TPDS0000000001.dat.dir/data/simps04/elem3.lbl
TPDS0000000001.dat.dir/data/simps04/elem3.tab
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TPDS0000000001.dat.dir/data/simps04/misled.tab
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TPDS0000000001.dat.dir/data/simps04/reject.tab
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TPDS0000000001.dat.dir/data/simps04/sightings.tab
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TPDS0000000001.dat.dir/data/simps04/single.tab
TPDS0000000001.dat.dir/data/simps04/stmodel.lbl
TPDS0000000001.dat.dir/data/simps04/stmodel.tab
TPDS0000000001.dat.dir/data/tnocencol/
TPDS0000000001.dat.dir/data/tnocencol/tnocencol.lbl
TPDS0000000001.dat.dir/data/tnocencol/tnocencol.tab
TPDS0000000001.dat.dir/data/tnocencol/tnocenrefs.lbl
TPDS0000000001.dat.dir/data/tnocencol/tnocenrefs.tab
TPDS0000000001.dat.dir/data/whiteley/
TPDS0000000001.dat.dir/data/whiteley/ecasband.lbl
TPDS0000000001.dat.dir/data/whiteley/ecasband.tab
TPDS0000000001.dat.dir/data/whiteley/ecasfltr.lbl
TPDS0000000001.dat.dir/data/whiteley/ecasfltr.tab
TPDS0000000001.dat.dir/data/whiteley/whiteley.lbl
TPDS0000000001.dat.dir/data/whiteley/whiteley.tab
TPDS0000000001.dat.dir/document/
TPDS0000000001.dat.dir/document/docinfo.txt
TPDS0000000001.dat.dir/index/
TPDS0000000001.dat.dir/index/index.lbl
TPDS0000000001.dat.dir/index/index.tab
TPDS0000000001.dat.dir/index/indxinfo.txt

real 0m0.467s
user 0m0.010s
sys 0m0.460s
[mdc@starburst OUTPUT]\$

Data set from AIP package is located inside /OUTPUT/TPDS0000000001.dat.dir.

Gather checksum values from files inside this directory

[mdc@starburst OUTPUT]\$ cd TPDS0000000001.dat.dir/

```

[mdc@starburst TPDS0000000001.dat.dir]$ md5sum * > ../as2004_0001/checksum_level1_mpga.out
md5sum: catalog: Is a directory
md5sum: data: Is a directory
md5sum: document: Is a directory
md5sum: index: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */* > ../as2004_0001/checksum_level2_mpga.out
md5sum: data/astermag: Is a directory
md5sum: data/discover: Is a directory
md5sum: data/lc: Is a directory
md5sum: data/mimps04: Is a directory
md5sum: data/occ04: Is a directory
md5sum: data/radar: Is a directory
md5sum: data/rshape04: Is a directory
md5sum: data/satcol: Is a directory
md5sum: data/sdss04: Is a directory
md5sum: data/simps04: Is a directory
md5sum: data/tnocencol: Is a directory
md5sum: data/whiteley: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */** > ../as2004_0001/checksum_level3_mpga.out
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/* >
../as2004_0001/checksum_level4_mpga.out
md5sum: */**/*: No such file or directory
[mdc@starburst TPDS0000000001.dat.dir]$

```

Compare checksum values gathered from our original data set and the values gathered from files extracted from the AIP

```

[mdc@starburst TPDS0000000001.dat.dir]$ cd ../as2004_0001/
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$ diff checksum_level1_orig.out checksum_level1_mpga.out
[mdc@starburst as2004_0001]$ diff checksum_level2_orig.out checksum_level2_mpga.out
[mdc@starburst as2004_0001]$ diff checksum_level3_orig.out checksum_level3_mpga.out
[mdc@starburst as2004_0001]$ diff checksum_level4_orig.out checksum_level4_mpga.out
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$

```

All output files are located in /home/mdc/mpga_v2/bin/OUTPUT/as2004_0001

END OF AS2004_0001 DATA SET TEST

FTP AIP FILES TO NSSDC

Put AIPs with its associated log file into a tar file and ftp them over to the NSSDC

```
[mdc@starburst vg_1501]$ tar -cvf PDS_AIP_VG_1501.tar TPDS0000000001_AIPfile.sfd.testfile out-
PDS-PACKAGE-GENERATOR.log
TPDS0000000001_AIPfile.sfd.testfile
out-PDS-PACKAGE-GENERATOR.log
[mdc@starburst vg_1501]$ cd ../as2004_0001/
[mdc@starburst as2004_0001]$ pwd
/home/mdc/mpga_v2/bin/OUTPUT/as2004_0001
[mdc@starburst as2004_0001]$ tar -cvf PDS_AIP_AS2004_0001.tar
TPDS0000000001_AIPfile.sfd.testfile out-PDS-PACKAGE-GENERATOR.log
TPDS0000000001_AIPfile.sfd.testfile
out-PDS-PACKAGE-GENERATOR.log
[mdc@starburst as2004_0001]$
```

```
ftp> send PDS_AIP_AS2004_0001.tar
local: PDS_AIP_AS2004_0001.tar remote: PDS_AIP_AS2004_0001.tar
227 Entering Passive Mode (128,183,114,83,214,189).
150 Opening BINARY mode data connection for PDS_AIP_AS2004_0001.tar
226 Transfer complete.
72734720 bytes sent in 1.7e+02 seconds (4.1e+02 Kbytes/s)
ftp> lcd ../vg_1501
Local directory now /home/mdc/mpga_v2/bin/OUTPUT/vg_1501
ftp> send PDS_AIP_VG_1501.tar
local: PDS_AIP_VG_1501.tar remote: PDS_AIP_VG_1501.tar
227 Entering Passive Mode (128,183,114,83,214,211).
150 Opening BINARY mode data connection for PDS_AIP_VG_1501.tar
226 Transfer complete.
383805440 bytes sent in 9.2e+02 seconds (4.1e+02 Kbytes/s)
```

DATA SET RETRIEVAL TEST FOR ROUND 2 DATA

The files that were retrieved from the NSSDC site are the following:

PDS_AIP_VG_1501.aip

PDS_AIP_AS2004_0001.aip

```
ftp> get PDS_AIP_AS2004_0001.aip
```

```
local: PDS_AIP_AS2004_0001.aip remote: PDS_AIP_AS2004_0001.aip
```

```
227 Entering Passive Mode (128,183,114,83,204,195).
```

```
150 Opening BINARY mode data connection for PDS_AIP_AS2004_0001.aip (72731578 bytes)
```

```
226 Transfer complete.
```

```
72731578 bytes received in 1.7e+02 seconds (4.1e+02 Kbytes/s)
```

```
ftp> get PDS_AIP_VG_1501.aip
```

```
local: PDS_AIP_VG_1501.aip remote: PDS_AIP_VG_1501.aip
```

```
227 Entering Passive Mode (128,183,114,83,204,204).
```

```
150 Opening BINARY mode data connection for PDS_AIP_VG_1501.aip (383800767 bytes)
```

```
226 Transfer complete.
```

```
383800767 bytes received in 9.6e+02 seconds (3.9e+02 Kbytes/s)
```

```
ftp>
```

VG 1501 DATA SET RETRIEVAL TEST

Rename the AIP file to the name that the MPGA software can recognize

```
[mdc@starburst bin]$
```

```
[mdc@starburst bin]$ mv PDS_AIP_VG_1501.aip TPDS0000000001_AIPfile.sfd.testfile
```

```
[mdc@starburst bin]$
```

```
[mdc@starburst bin]$
```

```
[mdc@starburst bin]$ ./COMMANDS/PDS-PACKAGE-GENERATOR.v2.splitter.cmd
```

PROGRAM OUTPUT

```
[mdc@starburst bin]$ SUCCESS
```

```
real 3m21.630s
```

```
user 0m0.010s
```

```
sys 0m0.430s
```

2 log files created in /bin:

```
out-PDS-PACKAGE-GENERATOR.splitter.log 141 bytes
```

```
out-PDS-PACKAGE-GENERATOR.splitter.diag 62654 bytes
```

2 output files created in /bin/OUTPUT, an attributes file and a data tar file:

TPDS0000000001.att **1949630 bytes**
TPDS0000000001.dat.tar **382720000 bytes**

```
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.splitter.log
TPDS0000000001 0   SPL PASS: "./TPDS0000000001_AIPfile.sfd.testfile" into
"./OUTPUT/TPDS0000000001.dat.tar" and "./OUTPUT/TPDS0000000001.att"
[mdc@starburst bin]$
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.splitter.diag
* VERBOSE: init registry, SRVR: dbase file="./MPGA_WORKING_DIR/srv_dbaseobj_XXXXXX"
* Splitter Started and Initialized:
```

 Accessing AIPs...

...

```
TPDS0000000001 0   SPL PASS: "./TPDS0000000001_AIPfile.sfd.testfile" into
"./OUTPUT/TPDS0000000001.dat.tar" and "./OUTPUT/TPDS0000000001.att"
*   SPL NOTE: module "local:./MPGA-splitter" completely processed 1 out of 1 AIPs in 201 (secs)
[mdc@starburst bin]$
```

Extract the data tar file to retrieve the data volume

```
[mdc@starburst OUTPUT]$ cd OUTPUT
[mdc@starburst OUTPUT]$ time tar -xvf TPDS0000000001.dat.tar
```

...

```
TPDS0000000001.dat.dir/software/win95/xnmhb450.dll
TPDS0000000001.dat.dir/software/win95/xnmhn450.dll
TPDS0000000001.dat.dir/software/win95/xnmte450.dll
```

```
real  0m20.097s
user  0m0.040s
sys   0m3.140s
```

```
[mdc@starburst OUTPUT]$
[mdc@starburst OUTPUT]$
[mdc@starburst OUTPUT]$
```

Data volume is found in /OUTPUT under the directory name TPDS0000000001.dat.dir.

Gather checksum values for every file in this extracted directory.

```
[mdc@starburst OUTPUT]$
[mdc@starburst OUTPUT]$
[mdc@starburst OUTPUT]$ cd retrieved_data/
[mdc@starburst retrieved_data]$ mkdir vg_1501
[mdc@starburst retrieved_data]$
```

```
[mdc@starburst retrieved_data]$ cd ..
[mdc@starburst OUTPUT]$ cd TPDS0000000001.dat.dir/
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum * >
../retrieved_data/vg_1501/checksum_level1_mpga.out
md5sum: catalog: Is a directory
md5sum: data: Is a directory
md5sum: document: Is a directory
md5sum: geometry: Is a directory
md5sum: index: Is a directory
md5sum: manage: Is a directory
md5sum: software: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */* >
../retrieved_data/vg_1501/checksum_level2_mpga.out
md5sum: data/crs: Is a directory
md5sum: data/ephem: Is a directory
md5sum: data/lecp: Is a directory
md5sum: data/mag: Is a directory
md5sum: data/pls: Is a directory
md5sum: data/pra: Is a directory
md5sum: data/pws: Is a directory
md5sum: document/crs: Is a directory
md5sum: document/lecp: Is a directory
md5sum: document/mag: Is a directory
md5sum: document/mission: Is a directory
md5sum: document/pls: Is a directory
md5sum: document/pra: Is a directory
md5sum: document/pws: Is a directory
md5sum: document/softdocs: Is a directory
md5sum: document/spice: Is a directory
md5sum: document/symbols: Is a directory
md5sum: geometry/pc: Is a directory
md5sum: geometry/sun: Is a directory
md5sum: software/dos: Is a directory
md5sum: software/src: Is a directory
md5sum: software/win: Is a directory
md5sum: software/win95: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/* >
../retrieved_data/vg_1501/checksum_level3_mpga.out
md5sum: data/ephem/hg: Is a directory
md5sum: data/ephem/s3: Is a directory
md5sum: data/lecp/average: Is a directory
md5sum: data/lecp/sector: Is a directory
md5sum: data/mag/hg: Is a directory
md5sum: data/mag/s3: Is a directory
md5sum: data/mag/sc_field: Is a directory
md5sum: data/pls/ele_mom: Is a directory
md5sum: data/pls/ion_mom: Is a directory
md5sum: data/pls/sheath: Is a directory
md5sum: data/pls/swind: Is a directory
md5sum: data/pws/sa: Is a directory
```

```

md5sum: software/src/midas: Is a directory
md5sum: software/src/pws16pc: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/* >
../retrieved_data/vg_1501/checksum_level4_mpga.out
md5sum: data/mag/hg/1_92s: Is a directory
md5sum: data/mag/hg/48s: Is a directory
md5sum: data/mag/hg/9_6s: Is a directory
md5sum: data/mag/s3/1_92s: Is a directory
md5sum: data/mag/s3/48s: Is a directory
md5sum: data/mag/s3/9_6s: Is a directory
md5sum: data/pls/sheath/l_mode: Is a directory
md5sum: data/pls/sheath/m_mode: Is a directory
md5sum: data/pws/sa/48s: Is a directory
md5sum: data/pws/sa/4s: Is a directory
md5sum: software/src/midas/exe: Is a directory
md5sum: software/src/midas/src: Is a directory
md5sum: software/src/pws16pc/obj: Is a directory
md5sum: software/src/pws16pc/src: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/*/* >
../retrieved_data/vg_1501/checksum_level5_mpga.out
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/*/*/* >
../retrieved_data/vg_1501/checksum_level6_mpga.out
md5sum: */**/*/*/*/*: No such file or directory
[mdc@starburst TPDS0000000001.dat.dir]$

```

Gather checksum values of every file in the original data volume set

```

[mdc@starburst TPDS0000000001.dat.dir]$ cd /data/vg_1501/
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$ md5sum * >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/vg_1501/checksum_level1_orig.out
md5sum: catalog: Is a directory
md5sum: data: Is a directory
md5sum: document: Is a directory
md5sum: geometry: Is a directory
md5sum: index: Is a directory
md5sum: manage: Is a directory
md5sum: software: Is a directory
[mdc@starburst vg_1501]$ md5sum */** >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/vg_1501/checksum_level2_orig.out
md5sum: data/crs: Is a directory
md5sum: data/ephem: Is a directory
md5sum: data/lecp: Is a directory
md5sum: data/mag: Is a directory
md5sum: data/pls: Is a directory
md5sum: data/pra: Is a directory
md5sum: data/pws: Is a directory
md5sum: document/crs: Is a directory

```

```
md5sum: document/lecp: Is a directory
md5sum: document/mag: Is a directory
md5sum: document/mission: Is a directory
md5sum: document/pls: Is a directory
md5sum: document/pra: Is a directory
md5sum: document/pws: Is a directory
md5sum: document/softdocs: Is a directory
md5sum: document/spice: Is a directory
md5sum: document/symbols: Is a directory
md5sum: geometry/pc: Is a directory
md5sum: geometry/sun: Is a directory
md5sum: software/dos: Is a directory
md5sum: software/src: Is a directory
md5sum: software/win: Is a directory
md5sum: software/win95: Is a directory
[mdc@starburst vg_1501]$ md5sum */**/* >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/vg_1501/checksum_level3_orig.out
md5sum: data/ephem/hg: Is a directory
md5sum: data/ephem/s3: Is a directory
md5sum: data/lecp/average: Is a directory
md5sum: data/lecp/sector: Is a directory
md5sum: data/mag/hg: Is a directory
md5sum: data/mag/s3: Is a directory
md5sum: data/mag/sc_field: Is a directory
md5sum: data/pls/ele_mom: Is a directory
md5sum: data/pls/ion_mom: Is a directory
md5sum: data/pls/sheath: Is a directory
md5sum: data/pls/swind: Is a directory
md5sum: data/pws/sa: Is a directory
md5sum: software/src/midas: Is a directory
md5sum: software/src/pws16pc: Is a directory
[mdc@starburst vg_1501]$ md5sum */**/*/* >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/vg_1501/checksum_level4_orig.out
md5sum: data/mag/hg/1_92s: Is a directory
md5sum: data/mag/hg/48s: Is a directory
md5sum: data/mag/hg/9_6s: Is a directory
md5sum: data/mag/s3/1_92s: Is a directory
md5sum: data/mag/s3/48s: Is a directory
md5sum: data/mag/s3/9_6s: Is a directory
md5sum: data/pls/sheath/l_mode: Is a directory
md5sum: data/pls/sheath/m_mode: Is a directory
md5sum: data/pws/sa/48s: Is a directory
md5sum: data/pws/sa/4s: Is a directory
md5sum: software/src/midas/exe: Is a directory
md5sum: software/src/midas/src: Is a directory
md5sum: software/src/pws16pc/obj: Is a directory
md5sum: software/src/pws16pc/src: Is a directory
[mdc@starburst vg_1501]$ md5sum */**/*/*/* >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/vg_1501/checksum_level5_orig.out
```

```
[mdc@starburst vg_1501]$ md5sum */**/*/*/*/* >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/vg_1501/checksum_level6_orig.out
md5sum: */**/*/*/*/*: No such file or directory
[mdc@starburst vg_1501]$
```

Compare the checksum values between the original data volume and the volume obtained from the AIP

```
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$ cd /home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/vg_1501/
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$
[mdc@starburst vg_1501]$ diff checksum_level1_orig.out checksum_level1_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level2_orig.out checksum_level2_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level3_orig.out checksum_level3_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level4_orig.out checksum_level4_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level5_orig.out checksum_level5_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level6_orig.out checksum_level6_mpga.out
[mdc@starburst vg_1501]$ diff checksum_level7_orig.out checksum_level7_mpga.out
```

Data was successfully retrieved from the AIP

**All log files and output files used in this test are in
/home/mdc/bin/OUTPUT/retrieved_data/vg_1501.**

END OF VG 1501 DATA SET RETRIEVAL TEST

AS2004 0001 DATA SET RETRIEVAL TEST

Rename the AIP file into the filename that the MPGA software can recognize

```
[mdc@starburst bin]$  
[mdc@starburst bin]$  
[mdc@starburst bin]$ pwd  
/home/mdc/mpga_v2/bin  
[mdc@starburst bin]$ mv PDS_AIP_AS2004_0001.aip TPDS0000000001_AIPfile.sfd.testfile  
[mdc@starburst bin]$
```

Run the splitter command to extract the data set from the AIP

```
[mdc@starburst bin]$ ./COMMANDS/PDS-PACKAGE-GENERATOR.v2.splitter.cmd
```

PROGRAM OUTPUT

```
[mdc@starburst bin]$ SUCCESS
```

```
real 0m34.424s  
user 0m0.000s  
sys 0m0.070s  
[mdc@starburst bin]$
```

2 log files created in /bin directory:

```
out-PDS-PACKAGE-GENERATOR.splitter.log    141 bytes  
out-PDS-PACKAGE-GENERATOR.splitter.diag  9353 bytes
```

2 output files created in /bin/OUTPUT directory, an attributes file and a data tar file:

```
TPDS0000000001.att          290260 bytes  
TPDS0000000001.dat.tar    72570880 bytes
```

```
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.splitter.log  
TPDS0000000001 0    SPL PASS: "/TPDS0000000001_AIPfile.sfd.testfile" into  
"/OUTPUT/TPDS0000000001.dat.tar" and "/OUTPUT/TPDS0000000001.att"  
[mdc@starburst bin]$ more out-PDS-PACKAGE-GENERATOR.splitter.diag  
* VERBOSE: init registry, SRVR: dbase file="/MPGA_WORKING_DIR/srv_dbaseobj_XXXXXX"  
* Splitter Started and Initialized:
```

```
    Accessing AIPs...  
TPDS0000000001.dat.dir/  
TPDS0000000001.dat.dir/aareadme.txt
```

```
TPDS0000000001.dat.dir/voldesc.cat
TPDS0000000001.dat.dir/catalog/
TPDS0000000001.dat.dir/catalog/astermag.cat
```

...

```
TPDS0000000001.dat.dir/index/
TPDS0000000001.dat.dir/index/index.lbl
TPDS0000000001.dat.dir/index/index.tab
TPDS0000000001.dat.dir/index/indxinfo.txt
TPDS0000000001 0 SPL PASS: "./TPDS0000000001_AIPfile.sfd.testfile" into
"./OUTPUT/TPDS0000000001.dat.tar" and "./OUTPUT/TPDS0000000001.att"
* SPL NOTE: module "local:./MPGA-splitter" completely processed 1 out of 1 AIPs in 34 (secs)
```

Extract the data tar file to get the data volume from the AIP

```
[mdc@starburst bin]$
[mdc@starburst bin]$
[mdc@starburst bin]$ cd OUTPUT/
[mdc@starburst OUTPUT]$ time tar -xvf TPDS0000000001.dat.tar
TPDS0000000001.dat.dir/
TPDS0000000001.dat.dir/aareadme.txt
TPDS0000000001.dat.dir/voldesc.cat
TPDS0000000001.dat.dir/catalog/
TPDS0000000001.dat.dir/catalog/astermag.cat
TPDS0000000001.dat.dir/catalog/astermagrefs.cat
TPDS0000000001.dat.dir/catalog/discover.cat
TPDS0000000001.dat.dir/catalog/discoverrefs.cat
TPDS0000000001.dat.dir/catalog/fpainst.cat
TPDS0000000001.dat.dir/catalog/i0028inst_2.cat
TPDS0000000001.dat.dir/catalog/i0028inst.cat
TPDS0000000001.dat.dir/catalog/i0034inst.cat
TPDS0000000001.dat.dir/catalog/i0035inst.cat
TPDS0000000001.dat.dir/catalog/irashost.cat
TPDS0000000001.dat.dir/catalog/j10_lysithea.cat
TPDS0000000001.dat.dir/catalog/j11_carme.cat
TPDS0000000001.dat.dir/catalog/j12_ananke.cat
TPDS0000000001.dat.dir/catalog/j13_leda.cat
TPDS0000000001.dat.dir/catalog/j17_callirrhoe.cat
TPDS0000000001.dat.dir/catalog/j18_themisto.cat
TPDS0000000001.dat.dir/catalog/j19_megaclite.cat
TPDS0000000001.dat.dir/catalog/j20_taygete.cat
TPDS0000000001.dat.dir/catalog/j22_harpalyke.cat
TPDS0000000001.dat.dir/catalog/j23_kalyke.cat
TPDS0000000001.dat.dir/catalog/j24_iocaste.cat
TPDS0000000001.dat.dir/catalog/j27_praxidyke.cat
TPDS0000000001.dat.dir/catalog/j6_himalia.cat
TPDS0000000001.dat.dir/catalog/j7_elara.cat
TPDS0000000001.dat.dir/catalog/j8_pasiphae.cat
```

TPDS0000000001.dat.dir/catalog/j9_sinope.cat
TPDS0000000001.dat.dir/catalog/lc.cat
TPDS0000000001.dat.dir/catalog/lcrefs.cat
TPDS0000000001.dat.dir/catalog/mimps.cat
TPDS0000000001.dat.dir/catalog/mimpsrefs.cat
TPDS0000000001.dat.dir/catalog/misssupparch.cat
TPDS0000000001.dat.dir/catalog/msxhost.cat
TPDS0000000001.dat.dir/catalog/msxmission.cat
TPDS0000000001.dat.dir/catalog/obs325t1host.cat
TPDS0000000001.dat.dir/catalog/obs325t2host.cat
TPDS0000000001.dat.dir/catalog/obs376t1host.cat
TPDS0000000001.dat.dir/catalog/obs413t2host.cat
TPDS0000000001.dat.dir/catalog/occ.cat
TPDS0000000001.dat.dir/catalog/occrefs.cat
TPDS0000000001.dat.dir/catalog/radar.cat
TPDS0000000001.dat.dir/catalog/radarrefs.cat
TPDS0000000001.dat.dir/catalog/references_list.cat
TPDS0000000001.dat.dir/catalog/rshape.cat
TPDS0000000001.dat.dir/catalog/rshaperefs.cat
TPDS0000000001.dat.dir/catalog/s19_ymir.cat
TPDS0000000001.dat.dir/catalog/s20_paaliaq.cat
TPDS0000000001.dat.dir/catalog/s21_tarvos.cat
TPDS0000000001.dat.dir/catalog/s24_kiviuq.cat
TPDS0000000001.dat.dir/catalog/s26_albiorix.cat
TPDS0000000001.dat.dir/catalog/s28_erriapo.cat
TPDS0000000001.dat.dir/catalog/s29_siarnaq.cat
TPDS0000000001.dat.dir/catalog/satcol.cat
TPDS0000000001.dat.dir/catalog/sdssmoc.cat
TPDS0000000001.dat.dir/catalog/sdssrefs.cat
TPDS0000000001.dat.dir/catalog/simps.cat
TPDS0000000001.dat.dir/catalog/simpsrefs.cat
TPDS0000000001.dat.dir/catalog/spirit3inst.cat
TPDS0000000001.dat.dir/catalog/tnocencol.cat
TPDS0000000001.dat.dir/catalog/u12_portia.cat
TPDS0000000001.dat.dir/catalog/u13_rosalind.cat
TPDS0000000001.dat.dir/catalog/u16_caliban.cat
TPDS0000000001.dat.dir/catalog/u17_sycorax.cat
TPDS0000000001.dat.dir/catalog/vgbhost.cat
TPDS0000000001.dat.dir/catalog/vgbinst.cat
TPDS0000000001.dat.dir/catalog/voldesc.cat
TPDS0000000001.dat.dir/catalog/whiteley.cat
TPDS0000000001.dat.dir/catalog/whiteleyrefs.cat
TPDS0000000001.dat.dir/data/
TPDS0000000001.dat.dir/data/astermag/
TPDS0000000001.dat.dir/data/astermag/astermag.lbl
TPDS0000000001.dat.dir/data/astermag/astermag.tab
TPDS0000000001.dat.dir/data/discover/
TPDS0000000001.dat.dir/data/discover/discnote.lbl
TPDS0000000001.dat.dir/data/discover/discnote.tab
TPDS0000000001.dat.dir/data/discover/discover.lbl

TPDS0000000001.dat.dir/data/discover/discover.tab
TPDS0000000001.dat.dir/data/lc/
TPDS0000000001.dat.dir/data/lc/lccross.lbl
TPDS0000000001.dat.dir/data/lc/lccross.tab
TPDS0000000001.dat.dir/data/lc/lc.lbl
TPDS0000000001.dat.dir/data/lc/lcref.lbl
TPDS0000000001.dat.dir/data/lc/lcref.tab
TPDS0000000001.dat.dir/data/lc/lc.tab
TPDS0000000001.dat.dir/data/mimps04/
TPDS0000000001.dat.dir/data/mimps04/mimpsalb.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpsalb.tab
TPDS0000000001.dat.dir/data/mimps04/mimpsfilt.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpsfilt.tab
TPDS0000000001.dat.dir/data/mimps04/mimpssight.lbl
TPDS0000000001.dat.dir/data/mimps04/mimpssight.tab
TPDS0000000001.dat.dir/data/occ04/
TPDS0000000001.dat.dir/data/occ04/occdiam.lbl
TPDS0000000001.dat.dir/data/occ04/occdiam.tab
TPDS0000000001.dat.dir/data/occ04/occlist.lbl
TPDS0000000001.dat.dir/data/occ04/occlist.tab
TPDS0000000001.dat.dir/data/occ04/occsatlist.lbl
TPDS0000000001.dat.dir/data/occ04/occsatlist.tab
TPDS0000000001.dat.dir/data/occ04/occsattime.lbl
TPDS0000000001.dat.dir/data/occ04/occsattime.tab
TPDS0000000001.dat.dir/data/occ04/occtimings.lbl
TPDS0000000001.dat.dir/data/occ04/occtimings.tab
TPDS0000000001.dat.dir/data/occ04/odiamrefs.lbl
TPDS0000000001.dat.dir/data/occ04/odiamrefs.tab
TPDS0000000001.dat.dir/data/radar/
TPDS0000000001.dat.dir/data/radar/radar.lbl
TPDS0000000001.dat.dir/data/radar/radarref.lbl
TPDS0000000001.dat.dir/data/radar/radarref.tab
TPDS0000000001.dat.dir/data/radar/radar.tab
TPDS0000000001.dat.dir/data/rshape04/
TPDS0000000001.dat.dir/data/rshape04/1620geographos.lbl
TPDS0000000001.dat.dir/data/rshape04/1620geographos.tab
TPDS0000000001.dat.dir/data/rshape04/1998ky26.lbl
TPDS0000000001.dat.dir/data/rshape04/1998ky26.tab
TPDS0000000001.dat.dir/data/rshape04/2063bacchus.lbl
TPDS0000000001.dat.dir/data/rshape04/2063bacchus.tab
TPDS0000000001.dat.dir/data/rshape04/216kleopatra.lbl
TPDS0000000001.dat.dir/data/rshape04/216kleopatra.tab
TPDS0000000001.dat.dir/data/rshape04/25143itokawa.lbl
TPDS0000000001.dat.dir/data/rshape04/25143itokawa.tab
TPDS0000000001.dat.dir/data/rshape04/4179toutatis2.lbl
TPDS0000000001.dat.dir/data/rshape04/4179toutatis2.tab
TPDS0000000001.dat.dir/data/rshape04/4179toutatis.lbl
TPDS0000000001.dat.dir/data/rshape04/4179toutatis.tab
TPDS0000000001.dat.dir/data/rshape04/4769castalia.lbl
TPDS0000000001.dat.dir/data/rshape04/4769castalia.tab

TPDS0000000001.dat.dir/data/rshape04/52760.lbl
TPDS0000000001.dat.dir/data/rshape04/52760.tab
TPDS0000000001.dat.dir/data/rshape04/6489golevka.lbl
TPDS0000000001.dat.dir/data/rshape04/6489golevka.tab
TPDS0000000001.dat.dir/data/satcol/
TPDS0000000001.dat.dir/data/satcol/satcol.lbl
TPDS0000000001.dat.dir/data/satcol/satcol.tab
TPDS0000000001.dat.dir/data/satcol/satrefs.lbl
TPDS0000000001.dat.dir/data/satcol/satrefs.tab
TPDS0000000001.dat.dir/data/sdss04/
TPDS0000000001.dat.dir/data/sdss04/g.lbl
TPDS0000000001.dat.dir/data/sdss04/g.tab
TPDS0000000001.dat.dir/data/sdss04/i.lbl
TPDS0000000001.dat.dir/data/sdss04/i.tab
TPDS0000000001.dat.dir/data/sdss04/r.lbl
TPDS0000000001.dat.dir/data/sdss04/r.tab
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1.lbl
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1run.lbl
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1run.tab
TPDS0000000001.dat.dir/data/sdss04/sdssmocadr1.tab
TPDS0000000001.dat.dir/data/sdss04/u.lbl
TPDS0000000001.dat.dir/data/sdss04/u.tab
TPDS0000000001.dat.dir/data/sdss04/z.lbl
TPDS0000000001.dat.dir/data/sdss04/z.tab
TPDS0000000001.dat.dir/data/simps04/
TPDS0000000001.dat.dir/data/simps04/addl.lbl
TPDS0000000001.dat.dir/data/simps04/addl.tab
TPDS0000000001.dat.dir/data/simps04/diamalb.lbl
TPDS0000000001.dat.dir/data/simps04/diamalb.tab
TPDS0000000001.dat.dir/data/simps04/elem1.lbl
TPDS0000000001.dat.dir/data/simps04/elem1.tab
TPDS0000000001.dat.dir/data/simps04/elem2.lbl
TPDS0000000001.dat.dir/data/simps04/elem2.tab
TPDS0000000001.dat.dir/data/simps04/elem3.lbl
TPDS0000000001.dat.dir/data/simps04/elem3.tab
TPDS0000000001.dat.dir/data/simps04/misled.lbl
TPDS0000000001.dat.dir/data/simps04/misled.tab
TPDS0000000001.dat.dir/data/simps04/reject.lbl
TPDS0000000001.dat.dir/data/simps04/reject.tab
TPDS0000000001.dat.dir/data/simps04/sightings.lbl
TPDS0000000001.dat.dir/data/simps04/sightings.tab
TPDS0000000001.dat.dir/data/simps04/single.lbl
TPDS0000000001.dat.dir/data/simps04/single.tab
TPDS0000000001.dat.dir/data/simps04/stmodel.lbl
TPDS0000000001.dat.dir/data/simps04/stmodel.tab
TPDS0000000001.dat.dir/data/tnocencol/
TPDS0000000001.dat.dir/data/tnocencol/tnocencol.lbl
TPDS0000000001.dat.dir/data/tnocencol/tnocencol.tab
TPDS0000000001.dat.dir/data/tnocencol/tnocenrefs.lbl
TPDS0000000001.dat.dir/data/tnocencol/tnocenrefs.tab

```
TPDS0000000001.dat.dir/data/whiteley/  
TPDS0000000001.dat.dir/data/whiteley/ecasband.lbl  
TPDS0000000001.dat.dir/data/whiteley/ecasband.tab  
TPDS0000000001.dat.dir/data/whiteley/ecasfltr.lbl  
TPDS0000000001.dat.dir/data/whiteley/ecasfltr.tab  
TPDS0000000001.dat.dir/data/whiteley/whiteley.lbl  
TPDS0000000001.dat.dir/data/whiteley/whiteley.tab  
TPDS0000000001.dat.dir/document/  
TPDS0000000001.dat.dir/document/docinfo.txt  
TPDS0000000001.dat.dir/index/  
TPDS0000000001.dat.dir/index/index.lbl  
TPDS0000000001.dat.dir/index/index.tab  
TPDS0000000001.dat.dir/index/indxinfo.txt
```

```
real 0m0.480s  
user 0m0.010s  
sys 0m0.460s
```

```
[mdc@starburst OUTPUT]$
```

Data volume is located in the /bin/OUTPUT/TPDS0000000001.dat.dir directory.

Gather checksum values of every file located in this retrieved directory.

```
[mdc@starburst OUTPUT]$  
[mdc@starburst OUTPUT]$ cd retrieved_data/  
[mdc@starburst retrieved_data]$ mkdir as2004_0001  
[mdc@starburst retrieved_data]$ cd ../TPDS0000000001.dat.dir/  
[mdc@starburst TPDS0000000001.dat.dir]$  
[mdc@starburst TPDS0000000001.dat.dir]$  
[mdc@starburst TPDS0000000001.dat.dir]$  
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum * >  
../retrieved_data/as2004_0001/checksum_level1_mpga.out  
md5sum: catalog: Is a directory  
md5sum: data: Is a directory  
md5sum: document: Is a directory  
md5sum: index: Is a directory  
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */* >  
../retrieved_data/as2004_0001/checksum_level2_mpga.out  
md5sum: data/astermag: Is a directory  
md5sum: data/discover: Is a directory  
md5sum: data/lc: Is a directory  
md5sum: data/mimps04: Is a directory  
md5sum: data/occ04: Is a directory  
md5sum: data/radar: Is a directory  
md5sum: data/rshape04: Is a directory  
md5sum: data/satcol: Is a directory  
md5sum: data/sdss04: Is a directory  
md5sum: data/simps04: Is a directory
```

```
md5sum: data/tnocencol: Is a directory
md5sum: data/whiteley: Is a directory
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/* >
../retrieved_data/as2004_0001/checksum_level3_mpga.out
[mdc@starburst TPDS0000000001.dat.dir]$ md5sum */**/*/* >
../retrieved_data/as2004_0001/checksum_level4_mpga.out
md5sum: */**/*/*: No such file or directory
[mdc@starburst TPDS0000000001.dat.dir]$
```

Gather checksum values of every file in our original data set

```
[mdc@starburst TPDS0000000001.dat.dir]$
[mdc@starburst TPDS0000000001.dat.dir]$
[mdc@starburst TPDS0000000001.dat.dir]$ cd /data/as2004_0001/
[mdc@starburst as2004_0001]$ md5sum * >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/as2004_0001/checksum_level1_orig.out
md5sum: catalog: Is a directory
md5sum: data: Is a directory
md5sum: document: Is a directory
md5sum: index: Is a directory
[mdc@starburst as2004_0001]$ md5sum */**/* >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/as2004_0001/checksum_level2_orig.out
md5sum: data/astermag: Is a directory
md5sum: data/discover: Is a directory
md5sum: data/lc: Is a directory
md5sum: data/mimps04: Is a directory
md5sum: data/occ04: Is a directory
md5sum: data/radar: Is a directory
md5sum: data/rshape04: Is a directory
md5sum: data/satcol: Is a directory
md5sum: data/sdss04: Is a directory
md5sum: data/simps04: Is a directory
md5sum: data/tnocencol: Is a directory
md5sum: data/whiteley: Is a directory
[mdc@starburst as2004_0001]$ md5sum */**/*/* >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/as2004_0001/checksum_level3_orig.out
[mdc@starburst as2004_0001]$ md5sum */**/*/*/* >
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/as2004_0001/checksum_level4_orig.out
md5sum: */**/*/*/*: No such file or directory
[mdc@starburst as2004_0001]$
```

Compare checksum values between our original data set and the data set retrieved from the AIP

```
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$ cd /home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/as2004_0001/
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
```

```
[mdc@starburst as2004_0001]$ diff checksum_level1_orig.out checksum_level1_mpga.out
[mdc@starburst as2004_0001]$ diff checksum_level2_orig.out checksum_level2_mpga.out
[mdc@starburst as2004_0001]$ diff checksum_level3_orig.out checksum_level3_mpga.out
[mdc@starburst as2004_0001]$ diff checksum_level4_orig.out checksum_level4_mpga.out
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
[mdc@starburst as2004_0001]$
```

Data set was successfully retrieved from the AIP.

**All output and log files from this test are located in
/home/mdc/mpga_v2/bin/OUTPUT/retrieved_data/as2004_0001.**

END OF AS2004 0001 DATA SET RETRIEVAL TEST
